The Bonneville Power Administration appreciates the opportunity to submit comments on a study of the benefits of economic dispatch. Because of the makeup of the Federal Columbia Power System and the significant benefits it provides to the Pacific Northwest our comments are focused on the differences between operations in a highly coordinated hydro-thermal system with storage capability and predominantly thermal systems. These differences are important to take into account when contemplating changes in the approach toward economic dispatch for the Pacific Northwest.

There is a long history in the Pacific Northwest of coordination between hydro and thermal projects that take advantage of hydro flexibility through storage at Federal projects. This coordination was originally established in the Columbia River Treaty with Canada and the Pacific Northwest Coordination Agreement in the 1960's. These agreements revolved around the management of the interconnected hydro generation projects in the Northwest that make up a large portion of the generation base and also included the hydro-thermal coordination in order to make the most effective use of the storage and shaping capabilities that Northwest hydro projects provide while operating thermal plants efficiently as baseload generation. With deregulation of the wholesale electricity market, much of this coordination has transitioned into the bilateral marketplace, leading to robust forward, day-ahead and real time markets in this region. These markets provide a balance of long- and short-term transactions through which buyers and sellers manage their inventories and plan for service to loads, while maintaining access to markets in case of unexpected generation outages, transmission derates, or high loads. Bonneville believes it is important to preserve these markets and the important role they play as we move forward.

Independent Power Producers are an important part of the resource mix in the Northwest. Bonneville's recently released concept paper[1] on BPA's future role in power supply sets out as one of seven goals the development of regional infrastructure by enabling non-federal resource development. There are over 5,000 MW of IPP generation in the Pacific Northwest, most of which have been developed in the last five years. In our experience these resources are generally not constrained by unit commitment issues, rather they are base loaded and only go offline for maintenance, forced outages, or because operation would be uneconomic given market prices. The greater issue for generation developers is long-term access to transmission that will allow new projects to be financed.

Bonneville would also like to observe that the goal of economic dispatch should not be confused with the approach of central unit commitment. While central unit commitment has been implemented with some success elsewhere in the country, the Pacific Northwest has a number of characteristics that make this approach problematic. These include that the dispatch decision is greatly complicated in that the hydroelectric resources of the Columbia River are not independent; they are interconnected with regard to their fuel supply. Management of interlinked Northwest hydro resources for generation efficiency is coordinated among resource owners and operators via a decentralized approach under the above agreements. This coordination is separate and distinct from efficient dispatch of independent resources in that the goal of hydro-system coordination is maximization of firm power production value from the hydro system, whereas the goal of economic

[1] Long-Term Regional Dialog Concept Paper September 2005

dispatch is minimization of short term operating costs. These are not compatible objectives in a hydro system where frequently higher cost resources are run while lower cost hydro is stored to create more total value for the system as a whole over the operating year. There are also significant and volatile statutory non-power requirements on the Federal system, which take precedence over purely economic dispatch, that project owners cannot delegate to a transmission system operator. Finally, because hydro resources on the Columbia River are generally fuel-constrained rather than capacity-constrained, there is a temporal decision that relies on the future value of that fuel that is critical to the dispatch decision and significantly increases the time horizon that a central unit commitment process would have to address[2].

From our perspective, generation dispatch in the Northwest has been and continues to be efficient. BPA conducted an internal analysis of the potential benefits of the proposed Grid West market design which took into account de-pancaking of transmission rates, implementation of a day-ahead transmission reconfiguration market and consolidated control area consisting of BPA, PacifiCorp & Idaho Power with a real-time generation redispatch market. The analysis was designed to look at the regional effects of implementing Grid West. The region in this case includes all of the Northwest Power Pool with the exception of Alberta and West Kooteni. The time period being simulated is the years from 2008 through 2013. It specifically captures the change in loads over time along with generation capacity expansion for not only Grid West but for the rest of the WECC. The modeling showed a net benefit derived from reduction in generation production costs via more efficiency dispatch of $178 million per year WECC wide or 0.5 percent of the $38,538 million west wide system. These gains would also come with costs for both those who would administer the improvements and individual market participants in terms of infrastructure, staffing, and risk mitigation, further reducing the net impact to the region.

In the regional Grid West and Transmission Improvements Group processes, the electric utility industry in the Pacific Northwest is working to develop an approach to generation dispatch that incorporates the region's successful tradition of cooperation and coordination, rather than displace these proven effective tools. We encourage parties to take the Northwest's record of successful cooperation into account in its consideration of economic dispatch, and to integrate our existing arrangements into its analysis.

[2] The challenges of incorporating efficient hydro dispatch into central unit commitment economic dispatch construct (sometimes referred to as the "PJM" approach) are well described in "Market Power Mitigation and Energy-Limited Resources", Orans, Olson and Opatrny, Electricity Journal, March 2003.